

OFFICE OF THE NEVADA ENVIRONMENTAL RESPONSE TRUST TRUSTEE

Le Petomane XXVII, Inc., Not Individually, But Solely as the Nevada Environmental Response Trust Trustee

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February 19, 2016

Mr. Clifford Lawson, P.E.
Nevada Division of Environmental Protection
Bureau of Water Pollution Control
901 S. Stewart Street, Suite 4001
Carson City, NV 89701

RE: NPDES Permit #NV0023060 – Amendment to Renewal Application
Nevada Environmental Response Trust Site
Henderson, Nevada

Dear Mr. Lawson:

As requested by the Nevada Division of Environmental Protection, Bureau of Water Pollution Control (NDEP – BWPC) in your recent conversation with Mr. Andrew Steinberg of the Nevada Environmental Response Trust (NERT or the “Trust”), please find enclosed information related to the changes to the NPDES permit renewal application for the Henderson, Nevada site. The NPDES permit renewal application was submitted to NDEP – BWPC on January 6, 2016 (the “Renewal”). As Mr. Steinberg indicated, NERT has been requested by NDEP – Bureau of Industrial Site Cleanup (NDEP – BISC) to modify the Renewal to include provisions for the potential treatment of impacted groundwater removed during the dewatering activities associated with the construction of two weirs by the Southern Nevada Water Authority (SNWA) along the Las Vegas Wash. In order to treat the groundwater extracted during dewatering activities, NERT will have to increase our capacity to treat contaminated groundwater. Based on an initial analysis, the NERT believes ion exchange (IX) to be the best treatment option, which we anticipate will be confirmed through the EECA process. The Trust is submitting this request now as time is of the essence. If the EECA process results in a different treatment option, we will modify the permit accordingly.

NERT is requesting modifications to the Renewal as follows:

- Construction two additional ion exchange (IX) treatment systems. These systems are proposed to be constructed adjacent to the proposed IX treatment system at Lift Station 1 that was identified in NERT’s permit renewal application dated January 6, 2016. The total discharge capacity of the expanded IX treatment systems will be 3,300 gallons per minute (gpm). The groundwater chemistry at the weir construction sites is believed to be very similar to the groundwater extracted by the existing Seep Well Field (SWF). As such, NERT anticipates that the additional IX treatment systems will be sufficient for treating the groundwater prior to discharge at NERT’s existing outfall.
- Replacement of approximately 700 feet of the existing effluent pipeline to handle an increase in effluent discharge. NERT anticipates that the existing effluent pipeline between Lift Station 1 and Outfall 001 will be replaced with a 36-inch diameter effluent pipeline to accommodate discharge from the on-site fluidized bed reactor (FBR) biological treatment plant and the effluent from the expanded IX treatment systems. NERT anticipates that this pipe will be equipped with an effluent metering station.

Figure 1 displays the layout of the planned weir construction sites, the proposed IX treatment systems at Lift Station 1, the existing seep well field (SWF) extraction wells, and the associated existing and proposed pipelines.

Figure 2 show a modified flow diagram for the entire groundwater extraction and treatment system (GWETS) that includes the proposed IX treatment system flows and the proposed AP-5 pond closure project flows. A modified process flow diagram for the proposed IX treatment systems at Lift Station 1 is provided in Drawings 1373-134-P001 and 1373-134-P002 (Attachment 1). Table 1 displays the discharge rates of NERT's biological and IX treatment systems. As indicated in Table 1, NERT is seeking a 30-day average effluent flow rate of 3,750 gpm and a daily maximum effluent flow rate of 4,000 gpm).

Table 1: Summary of Proposed Effluent Flow Rates	
Treatment System	Proposed Expected Flow Rates
FBR Biological Treatment Plant	845 – 1,400 gpm
IX Treatment System for Seep Well Field	150 – 600 gpm
IX Treatment Systems for Groundwater from Weir Construction Dewatering Activities	Up to 2,000 gpm
Totals:	Up to 3,750 gpm (30-day average) 4,000gpm (daily maximum)

Table 2 below summarizes the changes NERT is requesting to the loading effluent limitations with the proposed increase in the 30-day average effluent flow rate from 1,000 gpm (1.45 MGD) to 3,750 gpm (5.40 MGD). These changes are in addition to the changes that were requested in NERT's January 5, 2016 Renewal submittal.

Table 2: Summary of Changes to Loading Effluent Limitations with Proposed Increased Effluent Flow Rates			
Parameter	Concentration and Loading Effluent Limitations under current NPDES Permit NV0023060		Changes to Loading Effluent Limitations with Proposed Increased Effluent Flow Rates
	30-day Average Concentration	30-day Average Loading (lbs/day) ¹	30-day Average Loading (lbs/day) ^{2,3}
BOD ₅ (inhibited) (mg/L)	25	254	1,125
Perchlorate (g/L)	18	0.22	0.81
TSS (mg/L)	135	1,634	6,075
Total Iron (mg/L)	10	121.03	450
Manganese (mg/L)	5	60.52	225
	M&R	20*	74.4*
Total Phosphorus as P (mg/L)	* If the load in the Wash exceeds 434 ppd from 03/01 – 10/31, the Permittee shall negotiate an IWLA, or other approved method that ensures the WQS will be met.		
	M&R	40**	148.8**
Total Ammonia as N (mg/L)	** If the load in the Wash exceeds 970 ppd from 04/01 – 09/30, the Permittee shall negotiate an IWLA, or other approved method that ensures the WQS will be met.		

¹ Loading under the current NPDES Permit is based on the 30-day average effluent flow rate of 1,000 gpm (1.45 MGD).

² Loading shown is based on the proposed 30-day average effluent flow rate of 3,750 gpm (5.40 MGD).

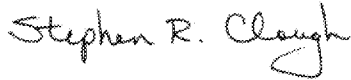
³ NERT is currently discussing mixing zone applications for some of these constituents with NDEP - BWPC.

BOD₅: 5-day biological oxygen demand
gpm: gallons per minute
IWLA: individual waste load allocation
mg/L: milligrams per liter
g/L: micrograms per liter

MGD: million gallons per day
M&R: monitor and report
ppd: pounds per day
TSS: total suspended solids
WQS: water quality standard

If you have any questions or concerns regarding this matter or require additional information, feel to contact me at (702) 686-9611 or at steve.clough@nert-trust.com.

Office of the Nevada Environmental Response Trust



Stephen R. Clough, P.G., CEM

Remediation Director

CEM Certification Number: 2399, exp. 3/24/17

Figures

Figure 1: Layout Map with Proposed SNWA Weirs and Three Proposed IX Treatment Systems at Lift Station 1

Figure 2: GWETS Flow Diagram with Three Proposed IX Treatment Systems and Proposed AP-5 Pond Closure Project Flows

Attachments

Drawing 1373-134-P001: Process Flow Diagram, LS-1 Improvements

Drawing 1373-134-P002: Process Flow Diagram, Temporary Treatment System

cc: Alison Fong, USEPA Region 9

ec: Jay Steinberg, as President of the Nevada Environmental Response Trust Trustee and not individually

Andrew Steinberg, Le Petomane, Inc.

Greg Lovato, NDEP, Deputy Administrator

James Dotchin, NDEP Bureau of Industrial Site Cleanup

James C. Parker, NDEP Bureau of Industrial Site Cleanup

Weiquan Dong, NDEP Bureau of Industrial Site Cleanup

Joe Maez, NDEP Bureau of Water Pollution Control

Nikita Lingenfelter, NDEP Bureau of Water Pollution Control

Tanya C. O'Neill, Foley & Lardner LLP

Michael DelVecchio, Envirogen Technologies, Inc.

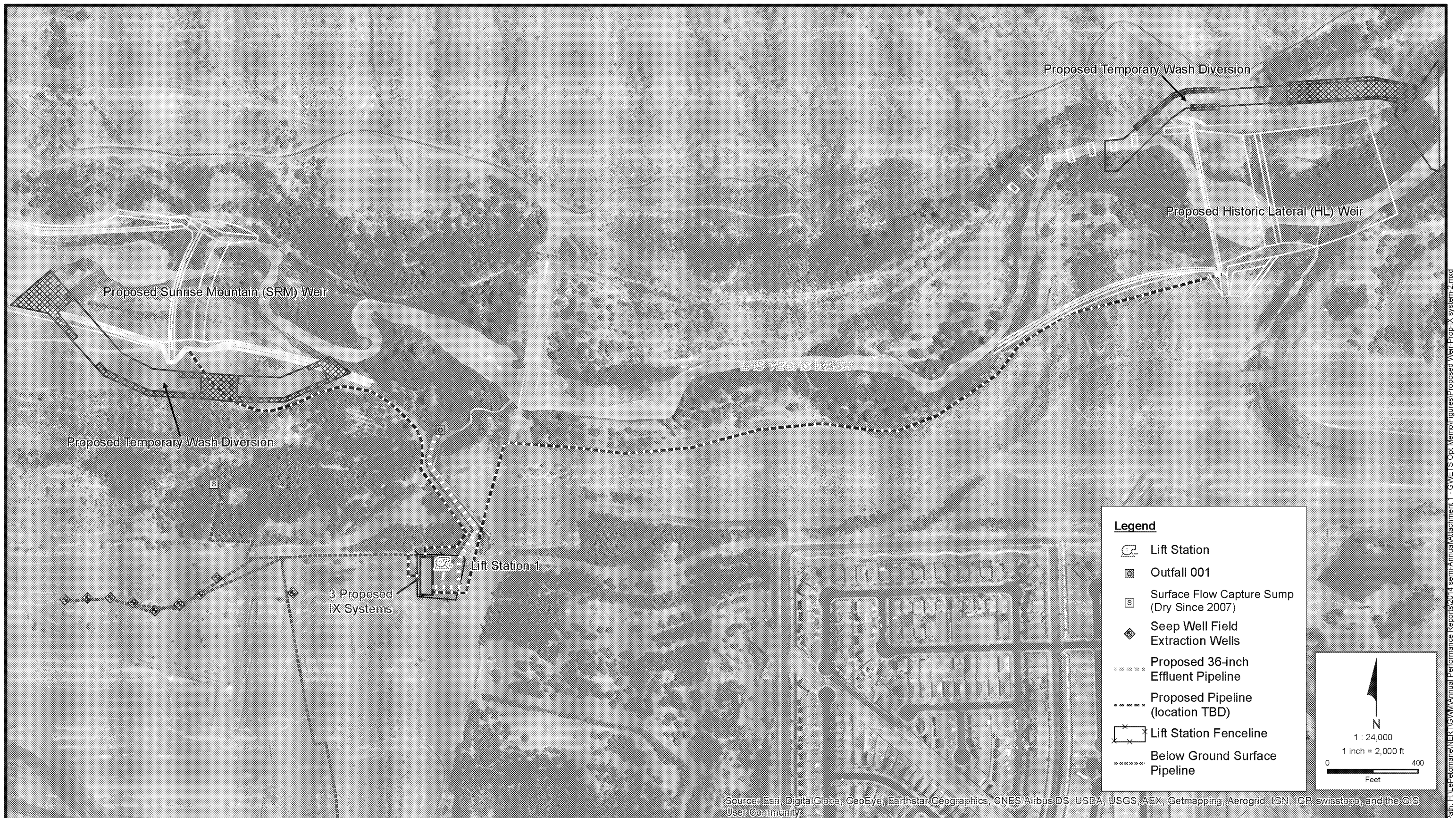
Wendy Prescott, Envirogen Technologies, Inc.

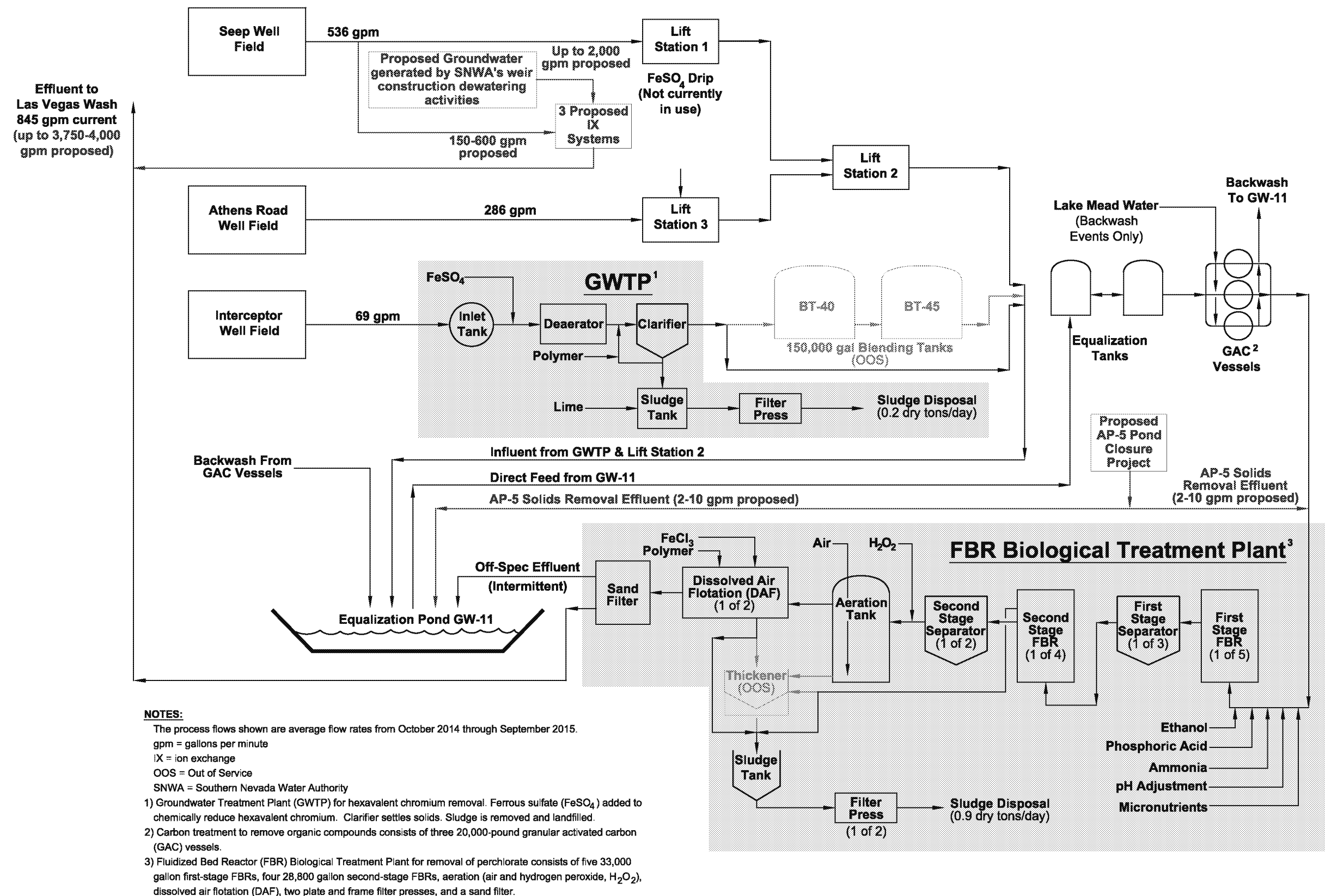
Allan J. DeLorme, Ramboll Environ

John Pekala, Ramboll Environ

Kimberly Kuwabara, Ramboll Environ

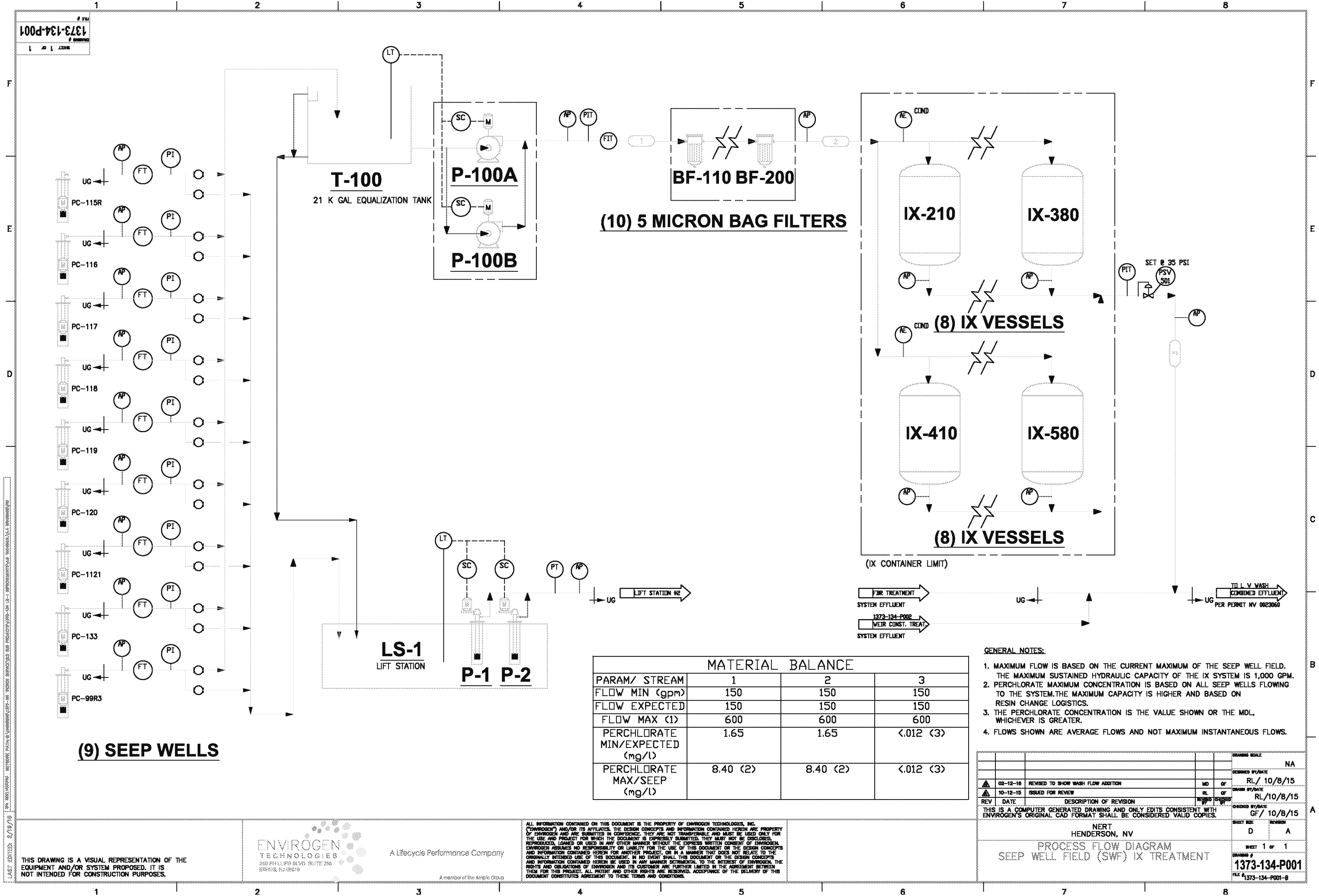
Derek Amidon, Tetra Tech, Inc.



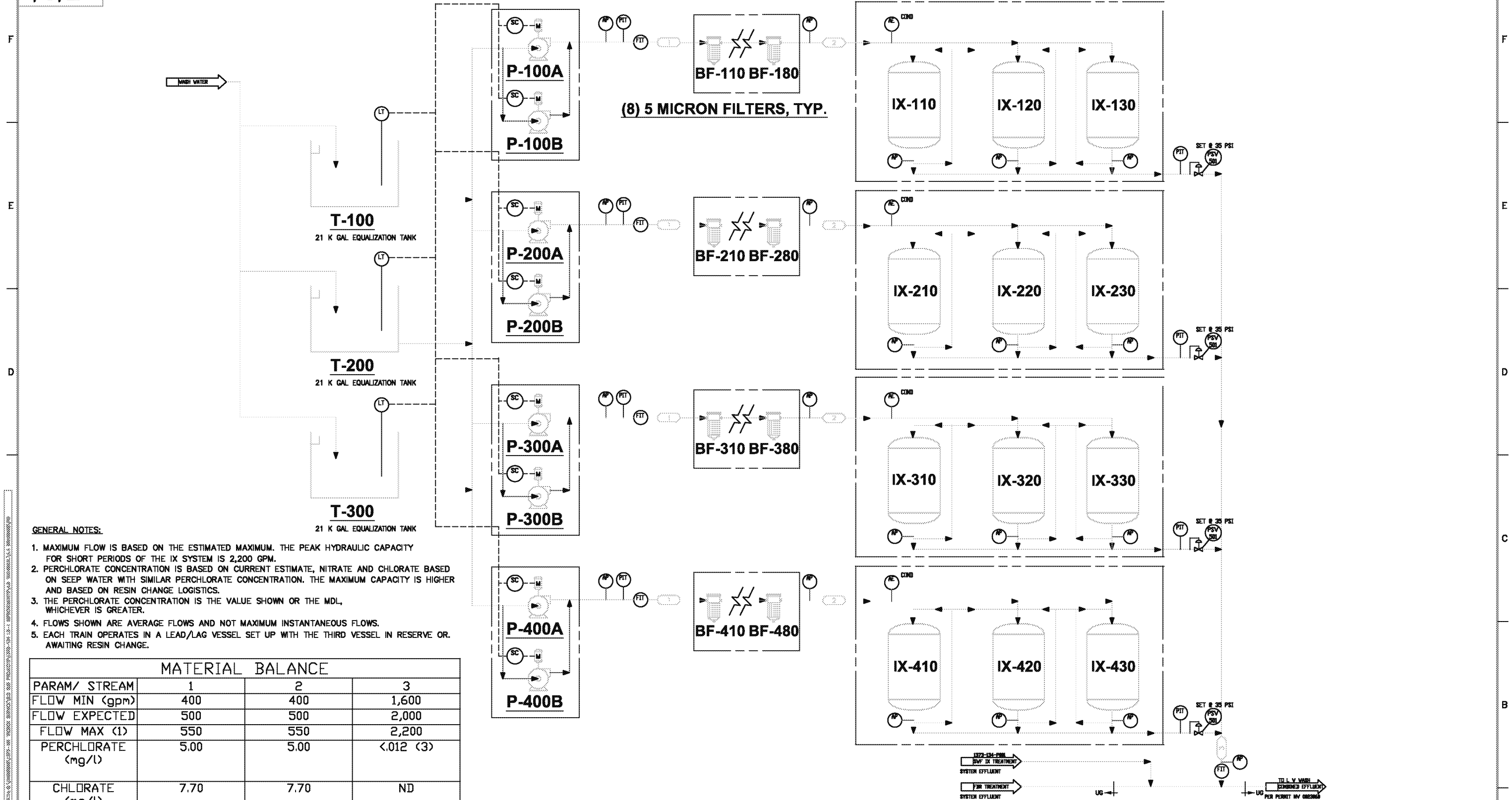


Attachment 1

IX Process Flow Diagrams



1373-134-P002
SHEET 1 OF 1



- GENERAL NOTES:**
1. MAXIMUM FLOW IS BASED ON THE ESTIMATED MAXIMUM. THE PEAK HYDRAULIC CAPACITY FOR SHORT PERIODS OF THE IX SYSTEM IS 2,200 GPM.
 2. PERCHLORATE CONCENTRATION IS BASED ON CURRENT ESTIMATE, NITRATE AND CHLORATE BASED ON SEEP WATER WITH SIMILAR PERCHLORATE CONCENTRATION. THE MAXIMUM CAPACITY IS HIGHER AND BASED ON RESIN CHANGE LOGISTICS.
 3. THE PERCHLORATE CONCENTRATION IS THE VALUE SHOWN OR THE MDL, WHICHEVER IS GREATER.
 4. FLOWS SHOWN ARE AVERAGE FLOWS AND NOT MAXIMUM INSTANTANEOUS FLOWS.
 5. EACH TRAIN OPERATES IN A LEAD/LAG VESSEL SET UP WITH THE THIRD VESSEL IN RESERVE OR AWAITING RESIN CHANGE.

MATERIAL BALANCE			
PARAM/ STREAM	1	2	3
FLOW MIN (gpm)	400	400	1,600
FLOW EXPECTED	500	500	2,000
FLOW MAX (l)	550	550	2,200
PERCHLORATE (mg/l)	5.00	5.00	<.012 (3)
CHLORATE (mg/l)	7.70	7.70	ND
NITRATE N (mg/l)	1.32	1.32	ND

THIS DRAWING IS A VISUAL REPRESENTATION OF THE EQUIPMENT AND/OR SYSTEM PROPOSED. IT IS NOT INTENDED FOR CONSTRUCTION PURPOSES.

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NERT
HENDERSON, NV

PROCESS FLOW DIAGRAM
TEMPORARY TREATMENT SYSTEM
WEIR CONSTRUCTION TREATMENT

REV	DATE	DESCRIPTION OF REVISION	RL	GF
1	02-12-16	ISSUED FOR REVIEW		
2	02-10-16	REVIEWED	RL	GF
3	02-10-16	CHECKED	GF	RL

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CHECKED BY/DATE: GF/ 02/10/16

SHEET NO: D A

SHEET 1 OF 1

DRAWING # 1373-134-P002

FILE # 1373-134-P002-A REV